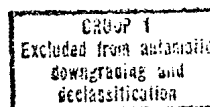


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PROJECT OBJECTIVE
NON-COMPUTERIZED INFORMATION HANDLING STUDY

1. INTRODUCTION. This paper outlines the background, limits, and requirements for a Government sponsored study project to improve the information and materials handling processes within the sponsors organization. Specifically, these processes are a number of specialized library type services which are currently the responsibility of the Research and Reference Division (R&RD). It is to these services that this paper and the ensuing study must address.
2. BACKGROUND. The Research & Reference Division (R&RD) is a component of the Production Services Group (PSG) which is responsible for production support within the sponsors facility. Included also in PSG is the Reprographics Division (RD), responsible for providing photographic, graphical, and general publication services; and the Automated Information Division (AID), responsible for operating the sponsors central computer services.
 - 2.1 R&RD Scope. The Research & Reference Division is responsible for maintaining a variety of libraries, files, and services used in both direct and indirect support of the primary photo intelligence production effort. It is responsive to requirements from production, management and certain external requesters.
 - 2.1.1 Structure. The Division is composed of four branches that are concerned with handling, storage, retrieval and disposition of materials as well as problems of record keeping, reporting, and file management. Materials for which R&RD is responsible include: maps, charts, books, periodicals, documents, cables, roll-film, cut-film, microfilm, machine print-out, and others.
 - 2.1.2 Services Provided.
 - A. Research and procurement of photography
 - B. Direct support of the basic photo intelligence production

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- C. Microfilming
- D. Courier service and mail delivery
- E. Registry and control of classified materials
- F. Dissemination and distribution of classified materials
- G. Cataloguing, indexing, and classification
- H. Information and document storage and retrieval
- I. Ordering, notification, and distribution of journals, periodicals, and books
- J. Reading Panel
- K. Inter-library loan
- L. Reference, bibliographic, and translation services.

2.1.3 Services of Primary Concern.

2.1.3.1 Film Handling. The physical storage or movement, accountability, circulation, and disposition of photographic film.

2.1.3.2 Microforms. The extent to which microforms can be efficiently used by R&RD for 1) file reduction, 2) document storage, 3) dissemination and notification, 4) supplemental distribution of documents, and 5) eventually for publication.

2.1.3.3 Information and Document Handling. Systems and procedures necessary to store, retrieve, reproduce, control, disseminate, and transport all information and non-film records which are the responsibility of R&RD. ⊗

2.2 Concept. The proposed project will encompass the identified requirements, taking into consideration both current operational policy and procedures and new operational concepts or requirements. Suggested additional problem areas may be brought to the attention of the sponsor, but under no circumstances should they be investigated without prior written consent of the contracting officer. Increased or new applications of automation or ADP support is highly desirable,

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but it must be clearly shown or demonstrated that such applications are more cost and/or manpower effective, or provide a better product than other techniques. The ultimate objective of the project is to help R&RD to deliver the necessary information or material to the user in the most cost effective manner.

3. PRESENT SITUATION.

3.1 Functional Description of Division.

3.1.1 Information Handling. The basic mission of R&RD, as reference support organization, is to supply the information required by the Division's patrons. In the exercise of its duties, the Division must process and supply a wide range of information both classified and unclassified. The Division is an information handling, as opposed to a data processing, organization.

Some of the information supplied by the Division takes the form of reference service or answers to questions. Much of the information is supplied in tangible form such as books, documents, maps, and film. Still other information is collected and packaged into dossiers on special subjects or areas. These dossiers must then be kept current so that they can be used for immediate direct support of the primary intelligence production effort.

The information processing or handling systems within R&RD can be thought of as serving one of three functions.

- A. Providing specific information
- B. Providing access to materials or information
- C. Supporting the movement or control of materials or information

The responsibility of providing specific information in answer to specific questions falls to the keepers of the various library

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collections and subject dossiers. In the library, professional librarians provide the traditional reference and bibliographic support. In other cases, such as the map library, the film library, the dossier collection and the classified documents collection, answers are found in the collection itself. Handling of these collections falls within the area described as Materials Handling. However, the information used in conjunction with these collections and the systems used to handle that information fall into the other two functional types mentioned above.

The second type, those systems that do not give answers but provide keys or guides to other sources of information, can be thought of as information tools. This group includes the Library Cataloging system. It also includes the Division's document storage and retrieval system. This system based on analysis and in depth indexing and classification is designed to do subject search and supply computer generated bibliographic print-out. It produces an index to new publications which is printed and published monthly and annually. It also accumulates a set of work listings, that are sorted by computer into five sequences. This set of work listings serves as a reference tool and guide to the classified documents collection which is shelved in the Library and filmed in microfiche.

The third set of information handling systems are those that provide administrative information or facilitate the flow and control of information and materials within R&RD. These include the Division's circulation control systems for documents and film. Also included in this group are the systems used in the Registry operation for security accountability and control. These systems based on Registry data also provide reports of foreign released material and documents disseminated.

- 3.1.2 Material Handling and Storage. In order to satisfy its requirements R&RD must provide for the physical handling and storage of a

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variety of materials. The Division is primarily concerned with the internal movement and control of materials used either directly or indirectly in support of the primary intelligence production effort.

Material Handling by the Division includes:

- mail room
- initial distribution of documents
- library collections
- map library collection
- subject dossier file
- film library

The library collections are stored or shelved, circulated, and disposed in accordance with standard library practice. The library materials are manually handled. -- The mail room and document dissemination have been aided by the acquisition of several mechanical handling devices. The film library and the map library are severely limited by inadequate space for their collections. Full-space motorized shelving has been installed to relieve the space problem in both the film and the map libraries.

There is need for improvement in both the handling and storing of material in R&RD. Problems have always been solved as they arose. The Full-space shelving and the mechanical handling devices in the mail room are examples of solutions to specific problems. This ad-hoc approach to materials handling problems might suffice for the present or as long as the general conditions do not change. The pressure from constantly expanding collections and need to insure adequate access to stored materials dictates that a comprehensive plan be developed for materials handling and storage in R&RD.

- 3.1.3 Security Accountability and Control. R&RD has the responsibility for the classified registry, courier service, and internal mail delivery.

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This assignment requires that certain specialized records, files, and services be maintained. The Division in accordance with regulations must:

- maintain a file of security accountability records
- process classified material designated for foreign release
- read, screen, disseminate, and file cables
- package outgoing, and receive and inspect incoming packages of classified material
- provide a report to management of the classified materials produced and disseminated
- maintain dissemination requirements

The records which provide the necessary management and security information are maintained by a system which is essentially manual. A few pieces of EAM equipment are available and limited support is provided by the PSG computer facility. The existing system is presently adequate but it is severely limited by security regulations and its modest data handling capability.

These restrictions seriously hamper the ability of the system to increase its volume. It is doubtful that the system could accommodate a substantial increase in material to be processed.

- 3.2 Areas of Concern. As previously noted there are several areas of materials and information handling that are of particular concern to R&RD. It is to these functions that the proposed study should be primarily addressed. Stated again briefly these are a) handling of film, b) use of microforms, and c) handling of information and documents.

- 3.2.1 Film Handling. The physical movement, accountability, circulation, and disposition of photographic film are among the greatest handling problems faced by R&RD. This film is received in boxes containing either metal or plastic cylindrical cans. The cans vary in size although a single box usually contains one size can.

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Upon receipt the film is controlled and sorted. Part of the film is delivered to the operational components. The remainder is moved directly to the film library where it is stored in Full-space motorized shelving. Later, the film that was initially charged to the operational components is returned to the film library shelves.

Accountability of roll film is maintained with EAM punched cards, in primarily a manual operation, with minimal machine support. This system can show if a can of film is in storage or to whom it is charged. The cards are also used to produce a delinquent list for film that has been charged out for over sixty days.

Film disposition is accomplished by shipment to either a remote Records Center or to an external processing site for destruction.

The addition of the Full-space motorized shelving has improved and enlarged the storage capacity of the Film Library, but there is need for much more improvement. Improvements in labeling, handling, and controlling the film are badly needed already, and a substantial increase in volume is anticipated. Both mechanized handling equipment and information processing techniques are needed if R&RD is to maintain adequate film library service.

3.2.2 Microforms. The use of microforms by R&RD is of concern not because it presents a problem but because it presents an opportunity.

what does this mean?

The Microfiche system currently being used in R&RD was developed to replace a previously phased out Minicard document storage and retrieval system. The camera equipment consists of a 16mm rotoline fan fold, a 35mm. planetary, and two 16mm. planetaries (one of which can be converted to 35mm.).

The 16mm. rotoline is used to copy computer printouts. The film copy is in roll form and is examined on roll film viewers.

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The 35mm. planetary camera is being used to produce aperture cards of maps.

The two 16mm. planetaries are used to copy documents. The film is cut and strip-mounted into 105mm. x 148.75mm. NB microjackets and is reproduced on standard diazo stock. The diazos can be viewed on microfiche readers or reproductions can be made on the microfiche printers.

The aperture cards and the roll film are provided as a service to specific requesters and the copies produced are not kept in a central file in R&RD.

It is not intended that the existing microfilm operation be evaluated. It does not require a detailed study to determine that the microfiche system, unlike the film handling system, is adequate for the present situation. Neither is a survey of the current "state of the art" in microform technology desired. The Division's intent is to determine the proper use of microfilm in the R&RD total information and materials handling operation. The study should therefore attempt to determine how much more the R&RD microfilm facility should be doing and what additional equipment would be needed if its present role were expanded.

- 3.2.3 Information & Document Handling. The handling of information in its many forms is basic to the Mission of R&RD. In the past each branch has attempted to solve its own problems, to select its own equipment, and to create its own procedures. As a result there are nearly as many ways to handle information in R&RD as there are forms of information.

Although this has proven adequate, it is recognized that much could be gained by a more coordinated approach to information handling. It is desirable that the study identify activities which can be coordinated or combined, those which can be mechanized or automated efficiently, and those which cannot or should not be modified. If any of R&RD's information handling

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problems have already been solved elsewhere or if there are better ways to accomplish the Division's goals these should be noted.

It is equally important that the study indicate additional services that could or should be offered by the Division.

As stated previously, the primary concern of this study should be to help R&RD provide the necessary information to the user in the most effective manner.

4. STUDY REQUIREMENTS.

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4.1 Objective. The purpose of the proposed study is to increase the efficiency and provide for improved services from R&RD by providing supporting services and analysis in the fields of Systems, Engineering, Library and Information Sciences. Specifically the study is to improve the effectiveness of storing, handling, and accounting for non-magnetically stored information. This may require modification of existing procedures or adoption of new policies and procedures. Increased application of ADP support should be employed to the extent that it is cost effective or will insure significantly better service. However, effort should be made to avoid systems proliferation. The goal of the study should be the ultimate reduction in the number of systems required for R&RD to serve its responsibilities.

Indicate R & RD in policy org chart

4.2 Philosophy. It is not intended that this study justify the responsibilities assigned to R&RD. It should, however, analyze R&RD requirements to the extent that the present procedures for serving R&RD responsibilities can be evaluated and to plan a system from which R&RD can continue to improve its operation. The study should plan for improved services without significant increases in space, personnel, or funding. It should take into consideration changes in procedure, and in volume anticipated by PSG management, including the need for a comprehensive plan providing the R&RD services in an entirely new facility.

The contractor will be expected to work closely with the sponsors Technical Representative and R&RD personnel

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throughout the course of the study, particularly during the development of procedures and planning stages. Information required by the contractor for planning purposes will be supplied by PSG management, and the contractor will be expected to keep the Technical Representative, R&RD, and PSG management adequately informed.

4.3 Alternatives. The general requirements for the study are to provide a systematic plan for improving the efficiency and cost effectiveness of the R&RD services; and to develop a conceptual plan for an entirely new facility to service the responsibilities of R&RD. In order for the sponsors management to evaluate the plans, it is necessary that alternatives be developed and appropriately presented as part of the plan. Additionally, if significant bottlenecks or interim solution can be identified during the analysis or evaluation phases, they should be reported in writing to the Technical Representative.

4.4 Procedures. It is anticipated that the study can be accomplished in four phases: Analysis, Evaluation, Design Plan, and Implementation Plan. It is envisioned that the Implementation Plan would not be accomplished in depth until the sponsor's management has had an opportunity to evaluate the Design Plan, and Alternatives and inform the contractor as to direction. The contractors proposal should include the rationale and criteria he proposes using during the analysis and evaluation phases of the study.

4.4.1 Analysis. In the analysis phase the contractor should investigate the current procedures for handling information within R&RD. It is important that the study examine and understand the requirements and responsibilities which guide the operation of the Division. As previously stated, examination of the requirements is not to address the need or attempt to justify them but a matter of understanding the Division's needs. Analysis should include detailed examination of:

- A. Requirements on the system
- B. Current Procedures
- C. Services Provided (output)
- D. Information and Materials Needed (input)

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- 4.4.2 Evaluation. Evaluation should consist of careful and thoughtful examination of the data collected during the analysis phase. It should result in a written interim report summarizing the data collected during analysis and evaluating the adequacy of the current system to serve the mission of R&RD.
- 4.4.3 Design Plan. The design phase will require the creation of two separate conceptual plans with alternatives. One will deal with R&RD problems as they exist during the analysis and evaluation phases, considering any projected workload changes within the same facility. The second will deal with meeting R&RD responsibilities, as delineated by management, in a totally new facility. ✓ The first plan should either modify the existing systems or design new ones to replace them. Alternatives should be presented giving a range of impact and effectiveness that may be achieved. The second plan must be a projection designed to meet the anticipated needs of the sponsor. Using information supplied by PSG management the contractor must design a new R&RD operational concept for a completely new facility. The contractor's proposal should outline how he would go about developing the design concepts. Either plan or any alternatives should give a realistic appraisal of the cost and complexities involved and the relative benefits to be expected.
- 4.4.4 Implementation Plan. Based on the sponsor's management acceptance of the plans or alternatives, a detailed implementation plan should provide for detailed specifications for all hardware and software, specifications for facility requirements, personnel requirements, training requirements, and for supervising or monitoring of the implementation of the new system and procedures.

5. GENERAL & ADMINISTRATIVE. The conditions outlined below are to be used as general guidelines in the preparation of proposals and administering the contract unless these conditions are superceded by any resultant contract. The Government retains the right to cancel the project at any time subject to a formal contractual agreement without any obligations on its behalf.

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- 5.1 Administration. The Government will retain overall control and responsibility for the project. Written approval from the contracting officer must be obtained before any changes in objectives, cost, priority, or delivery schedules are effected or before any subcontractor or consultant is employed.
- 5.2 Contractor Responsibilities. The contractor is expected to provide competent and cooperative administrative and management support in governing his own efforts. He will be vested with certain authority to control the directives and degree of technical effort within the bounds of the estimated costs. As a part of the overall responsibility, the contractor will be responsible for the work performed by all of his subcontractors and consultants. Additionally he will be expected to assign component technical personnel, commensurate with the task, to the project for an appropriate percentage of time.
- 5.3 Security & Logistics. Accomplishment of this program will require that the contractor personnel assigned to the project have special security clearances. Granting of the necessary clearances must be held to a minimum commensurate with meeting the program objectives. The contractor must therefore exercise good judgment in selecting personnel for the program and allowing sufficient lead time for achieving the necessary clearances. Because of the nature of the program, it is highly desirable that the contractor personnel be detached to the Government's facility for the major portions of the project. Appropriate office space will be provided as necessary, but all other clerical and logistics support will remain the responsibility of the contractor.
- 5.4 Technical Representative. The contracting officer will be the ultimate authority for the control of the contract. He will, however, designate a technical representative to monitor the project and authorize or direct specific efforts contained within the scope of the contract. Such designation shall be given in writing in its original form or in confirmation of an oral designation and be a single individual. The contractor will accept no other authorization or guidance except that of the contracting officer or technical representative.

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5.5 Project Coordination. Although the work to be performed under the terms of this document is confined to the requirements as discussed in section 4, interfaces will exist between this project and the sponsor's operational requirements and constraints. It is essential that adequate liaison be maintained between the selected contractor and the sponsor's operations or other studies as they relate to this project in order to insure a compatible and integrated system approach. Inasmuch as the sponsor operates a central computer system, it is mandatory that any proposed use of ADP services be fully compatible with the existing computer or adequately justified and documented on recommending any additional ADP equipment.

5.6 Proposals. The proposals should be comprehensive, well organized, clear, concise, and limited in content to that information required to qualify the prospective bidder and demonstrate ability to perform satisfactorily within the scope of this document. The submission should be arranged into three separately bound volumes as follows:

5.6.1 Volume I, Technical Presentation. This volume should present the technical approach the contractor proposes taking, formatted into the following sections.

- Task Abstract: Contents - Synopsis of task within 12 lines.
- Introduction: Contents - Covering background and task justification rationale.
- Technical Discussion: Contents - Detail and subsections as a function of the task.
- Work Statement: Contents - This statement should succinctly describe the individual tasks to be done and should be sufficiently definitive that one may read this section to understand the purpose and scope of the tasks.
- Deliverable Items: Contents - Reports as detailed in paragraph 5.7 in accordance with the requirements.
- Schedule of the project percentage of completion of performance by months and related schedule of percentage of project expenditures by month in tabular form.

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- Time Bar Chart: Contents - Chart of work progress vs. time showing expenditure schedule and milestones.

5.6.2 Volume II, Company Resources. This volume should include the following information:

- Management Plan: Contents - Graphical and textual description of project management responsibilities and resume of key and technical personnel which would be assigned to the task.
- Company Capability: Contents - Description of contractor's past experience relating to the proposed work.

5.6.3 Volume III, Financial Data. This volume should include all funding and cost details as requested in the contracting officers transmittal letter, and include a comprehensive financial statement in support of the proposed fee. If any GFE or supporting services are desired, they should also be included in this section.

5.7 Reports. Regular reports will be required throughout the life of the contract. All reports will meet the basic requirements of specification DB-1001, GENERAL REQUIREMENTS FOR CONTRACTUAL DOCUMENTATION, attached hereto. In the event that it becomes necessary to prepare a technical manual, DB-1003, GENERAL REQUIREMENTS FOR THE PREPARATION OF TECHNICAL MANUALS, attached hereto, should be used as a guideline. The minimum required reports, prepared in accordance with DB-1001, are:

5.7.1 Monthly Progress Reports.

5.7.2 Final Report.

5.7.3 Interim Detailed Report. To be prepared at the completion of the evaluation and design plan phases.

5.7.4 Briefings. To be prepared in conjunction with the completion of the design phases and the final report. Sufficient documentation,

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should accompany them so that either the sponsors or contractors representative could give the briefing.

- 5.8 Delivery. While it is the wish of the Government to accomplish the aims of this program as expeditiously as possible, sufficient time should be allotted for a thorough and complete accomplishment of the aims set forth herein. Tentatively it is envisioned that the program will be completed in nine months from the time the contractor has adequately cleared personnel.

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